Proceedings of the Hawaiian Entomological Society (1998) 33: 1–8.

PROCEEDINGS OF THE HAWAIIAN ENTOMOLOGICAL SOCIETY

FOR THE YEARS 1994, 1995

MINUTES FOR 1994–1995

The following are brief synopses of the minutes of the meetings of the Hawaiian Entomological Society for the years 1994 and 1995. More detailed minutes are kept with the Secretary of the Society. The following abbreviations are used throughout: BPBM = Bishop Museum, Honolulu; HDOA = Hawai'i State Department of Agriculture, Honolulu.

1994

FEBRUARY

The 1047th meeting of the Hawaiian Entomological Society was held at the Ala Moana Hotel, Honolulu 16–18 February 1994 with President Neal L. Evenhuis presiding.

Program: The meeting constituted the 3rd annual Pacific Entomology Conference.

MAY

The 1048th meeting of the Hawaiian Entomological Society was held at the Bishop Museum on 9 May 1994, with President N.L. Evenhuis presiding. Fourteen members and three guests were present.

Program: C.R. Joyce, Scientist Director (retired), U.S. Public Health Service, spoke on the "Present Status of Some of the Vector-borne Diseases in the Pacific Area."

NOTES and EXHIBITIONS

Pelastoneurus sp. (Diptera: Dolichopodidae). Specimens were collected earlier this year in the Mānoa and Halawa valleys by W. Perriera and D. Preston, respectively. Species of this genus are commonly found in grassy areas. The specific biology of the immatures are unknown, but are predaceous as are the adults. The finds constitute a new state record for this genus. **Neal L. Evenhuis.**

AUGUST

The 1049th meeting of the Hawaiian Entomological Society was held at the Bishop Museum on 8 August 1994, with President N.L. Evenhuis presiding. Sixteen members and three guests were present.

Program: D.A. Polhemus, Entomologist with the Hawai'i Biological Survey at the Bishop Museum, gave a presentation on the current status of the endemic Hawaiian damselflies of the genus *Megalagrion*.

NOVEMBER

The 1050th meeting of the Hawaiian Entomological Society was held at the Bishop Museum on 14 November 1994, with President N.L. Evenhuis presiding. Fourteen members and four guests were present

Program: Dr. Vincent P. Jones, Department of Entomology, University of Hawai'i at Manoa, Honolulu, spoke on the "Role of the leafhopper, *Sophonia rufofascia* (Kuoh & Kuoh) in plant damage in forest and watershed areas on Oahu".

1995

FEBRUARY

The 1051st meeting of the Hawaiian Entomological Society was held at the Ala Moana Hotel, Honolulu 15–17 February 1995 with President Susan D. McCombs presiding.

Program: The meeting constituted the 4th annual Pacific Entomology Conference.

MAY

The 1052nd meeting of the Hawaiian Entomological Society was held at the Department of Entomology, University of Hawai'i at Manoa, Honolulu on 8 May 1995 with President Susan D. McCombs presiding. 31 members and 5 guests attended.

Program: Susan Miller, National Resources Defense Council (NRDC) spoke on the Alien Species Action Plan (ASAP).

NOTES AND EXHIBITIONS

Lepisota sp. (Hymenoptera: Formicidae): This ant species, which constitutes a new state record, was discovered in a 1–2 square mile area at Pearl Harbor Submarine Base. It was observed tending scales for honeydew and carrying insect prey to its nest. It has the potential to become a pest in Hawai'i because of its caretaking behavior of hompterans and predatory behavior. **Neil Reimer.**

AUGUST

The 1053rd meeting of the Hawaiian Entomological Society was held at the Department of Entomology, University of Hawai'i at Manoa, Honolulu on 14 August 1995 with President Susan D. McCombs presiding. 23 members and 5 guests attended.

Program: Drs. John McHugh, Nick Dudley, and Michael Austin, Hawai'i Sugar Planters' Association, Aiea, presented a consolidated new approach to Hawaiian agriculture.

NOVEMBER

The 1054th meeting of the Hawaiian Entomological Society was held at the Department of Entomology, University of Hawai'i at Manoa, Honolulu on 13 November 1995 with President Susan D. McCombs presiding. 33 members and 20 guests attended.

Program: Dr. Neil Reimer, Hawai'i State Department of Agriculture, Plant Quarantine Division, gave a presentation on "Pest ants in Hawai'i and their control".

NOTES AND EXHIBITIONS

Planiocephalus flavicosta (Stål) (Homoptera: Cicadellidae): In October 1994, one of us (WDP) collected a single female of an unfamiliar leafhopper during general sweeping of weeds and grasses at Waimanalo, O'ahu. Subsequently, more than a dozen specimens of this leafhopper, of both sexes, were collected in the same manner by us on the campus of the University of Hawai'i at Manoa and the University of Hawai'i College of Tropical Agriculture and Human Resources Experimental farm at Waimanalo, O'ahu.

During July 1995, specimens of this leafhopper, which we recognized as previously unreported immigrant species, were sent to Mr. Ray Gill, Insect Taxonomist at the California State Department of Food and Agriculture in Sacramento, CA. Mr. Gill identified the leafhopper as *Planiocephalus flavicosta* (Stål), a species originally described from Rio de Janeiro, Brazil, but which is now known to be widespread in the American tropics. The species is listed as occurring in several Gulf states (Florida, Louisiana, Texas) as well as Central America, the West Indies, and South America as far south as northern Argentina. This is the first record of this species in the Pacific Region.

The plant hosts of this leafhopper in Hawai'i have not yet been determined, and we found none in the literature we consulted. Related deltocephaline leafhoppers are mostly grass feeders and we expect that this species also probably feeds on grasses. **John W. Beardsley & W.D. Perreira.**

Aphytis acutaspidis Rosen & DeBach (Hymenoptera: Aphelinidae): During June 1994, we collected a single female specimen of an *Aphytis* species with distinctively marked forewings, resembling those of species in the genus *Marietta* Motschulsky. The specimen was collected on a yellow sticky-board trap located on the road into Halawa Valley, Moloka'i. No additional specimens were found until June 1995, when several were taken on a similar trap near the 'Ili'ili'ōpae Heiau at Mapulehu, Moloka'i. To date, we have collected more than a dozen specimens (all females) from yellow sticky-board traps at several locations on East Moloka'i. The species was identified by one of us (JWB) as *Aphytis acutaspidis* based on the original description (Rosen, D. & P. DeBach, 1978, *Species of* Aphytis *of the world*. W. Junk, The Hague) and by direct comparison with paratypes at the Department of Entomology, University of California, Riverside. Because of the distinctively marked female forewing, this species is realtively easy to identify. No other *Aphytis* species known from Hawaii has maculate wings.

Aphytis acutaspidis was originally described from 4 females reared by the late Paul DeBach from *Acutaspis albopicta* (Cockerell) (Homoptera: Diaspididae), collected on coconut palm at Rural University, between Rio de Janeiro and São Paulo, Brazil, in 1962. The male of this species is unknown, but males of closely related species in tropical America lack distinctive markings on the wings, therefore, if present, males may be difficult to recognize. Apparently this is the first record of this species outside of Brazil.

The host scale of this *Aphytis* in Brazil is not known to occur in Hawai'i, but the wasp may develop on other species of Diaspididae here. All *Aphytis* species for which hosts are known develop as ectoparasites of armored scale insects beneath the scale of the host female. **John W. Beardsley & W.D. Perreira.**

Bernarr Kumashiro, Hawai'i State Department of Agriculture, Honolulu, presented a list entitled "New Hawaii state, island, and host records". The following is a synopsis of the taxa listed in this paper. Full information is held at the Hawai'i State Department of Agriculture.

New State Records:

Scirtothrips citri (Moulton) (Thysanoptera: Thripidae): High numbers of this thrips were found on mango causing leaf curl of the young terminal growth with subsequent leaf drop. Specimens were collected 28 October 1994 at Kihei, Maui by J. Anderson. Although it is known as an economic pest of citrus, it also has been reported from other subtropical fruit trees and shrubs in California. In addition to injuring young leaves, this thrips also can cause damage to fruit and buds. This species occurs naturally in the southwest U.S. and in Mexico.

Frankliniella insularis (Franklin) (Thysanoptera: Thripidae): Specimens of this species were collected at the Waiakea Agricultural Research Station, Hawai'i Island, in flowers of Turks cap (*Malvaviscus arboreus*) in January 1995 by S. Nakahara who also did the identification. This thrips occurs in the southern US (Florida, Texas, Arizona), Bermuda, the Caribbean area, Mexico, Central and most of South America in various flowers.

Dolichothrips sp. prob. ***nesius*** Stannard (Thysanoptera: Thripidae): Specimens of this thrips were also collected at the same time and place as those of *Frankliniella insularis* (see above). This species is present on Guam on *Melastoma*. *Dolichothrips* occurs on some of the south Pacific Islands, the Orient, and Africa.

Diclisioprocta stellata Guenée (Lepidoptera: Geometridae): Specimens were collected at Wailuku, Maui on ***Bougainvillea*** on 13 December 1994 by C. Arakaki and reared to adults by Hawaii Department of Agriculture, Maui staff. This species was also found at Hanapepe, Kaua'i on 25 January 1995 and at Keauhou, Kona on 17 May 1995.

Pollaspoides formosanus (Takahashi) (Homoptera: Diaspididae): Specimens of this scale insect were collected in December 1994 at a bamboo nursery in Kawaihae on the Big Island by S. Nakahara who also did the determination. This is also a new U.S. record. This species occurs in Taiwan and China on various bamboos.

Ixeuticus sp. nr. ***martius*** (Simon): Specimens of this spider were collected at Niu Valley, Pearl City, Honolulu, and Aiea, on O'ahu from 1992 to 1995. It has been known to occur on Maui for several years, but is not abundant.

Tetranychus evansi Baker & Pritchard (Acari: Tetranychidae): This mite was collected at the Maui Community College agricultural field (Kahului) on popolo berry on 19 July 1995 by C. McGrath. It was previously collected on O'ahu in 1994.

Melanagromyza sp. (Diptera: Agromyzidae): This species (different than *M. splendida* Frick) was collected from iris in Hilo, Hawai'i on 14 January 1995 and identified by R.J. Gagné, USDA-SEL.

Clastoptera xanthocephala Germar (Homoptera: Cercopidae): Found on *Clidemia* at Makiki, O'ahu on 7 February 1995. It was also observed on rosemary at a nursery in Makena, Maui near the Maui Prince Hotel.

Niesthrea louisianica Sailer (Heteroptera: Rhopalidae): Specimens of this bug were collected from okra at Kahuku on 30 June 1995 by R. Hamasaki. the species is known to breed on *Hibiscus*. It ranges from New York south to Florida and west to Iowa, Texas, and Arizona. It was subsequently found on Chinese hibiscus hedge at Kahuku and later on okra at Lualualei.

New Island Records:

Patchiella reaumuri (Kaltenbach) (Homoptera: Aphididae): Specimens of this aphid were found on the roots of dryland Chinese taro at Kahuku, O'ahu on 31 January 1995 by R. Hamasaki. Previously, the aphid was only known from the Big Island.

Copris incertus prociduus Say (Coleoptera: Scarabaeidae): Specimens of this scarab beetle were found on Lana'i on 6 November 1994.

Tetraneura nigriabdominalis (Sasaki) (Homptera: Aphididae): This aphid was collected on potted kikuyugrass at the UH Research Station at Wailua, Kaua'i on 7 February 1995 by R. Ebert.

Aceria hibisci (Nalepa) (Acari: Eriophyidae): Samples of hibiscus infested with this mite were collected at Lana'i City on 1 May 1995 by G. Uchida and C. McGrath.

Balta sp. (Blattaria: Blatellidae): This unnamed species, previously known only from O'ahu, was collected in a house at Ka'anapali, Maui on 11 April 1995.

Bactrocera latifrons (Hendel) (Diptera: Tephritidae): Specimens were collected at an herbal garden near Lana'i airport in October 1994 by G. Uchida and C. McGrath.

Vanduzeea segmentata (Fowler) (Homoptera: Membracidae): Specimens were collected at an herbal garden near Lana'i airport in October 1994 by G. Uchida and C. McGrath.

Leptodictya tabida (Herrich-Schaeffer) (Heteroptera: Tingidae): Specimens were collected at an herbal garden near Lana'i airport in October 1994 by G. Uchida and C. McGrath.

Protalebrella brasiliensis (Baker) (Heteroptera: Cicadellidae): Specimens were collected at an herbal garden near Lana'i airport in October 1994 by G. Uchida and C. McGrath.

Taeniaptera angulata (Loew) (Diptera: Micropezidae): Specimens were collected at

an herbal garden near Lana'i airport in October 1994 by G. Uchida and C. McGrath.

Scenopinus adventicius Hardy (Diptera: Scenopinidae): Specimens were collected at an herbal garden near Lana'i airport in October 1994 by G. Uchida and C. McGrath.

Lygus elisus Van Zuzee (Heteroptera: Miridae): Specimens were collected at an herbal garden near Lana'i airport in October 1994 by G. Uchida and C. McGrath.

Xylopsocus capucinus (Fabricius) (Coleoptera: Bostrichidae): Specimens of this beetle were collected from lomi lomi sticks obtained on the Big Island and brought to Kaaawa, O'ahu. Lomi lomi sticks are shaped like a broken wishbone and used on pressure points on the back to relieve aches and pains. This is a new record for Hawaii Island.

Olfersia aenescens Thomson (Diptera: Hippoboscidae): A specimen of this louse fly was collected on Huelo Island, Moloka'i in July 1992. It was previously known only from Kaua'i and O'ahu in Hawai'i.

Name Change:

Hydatothrips samayunkur Kudo (Thysanoptera: Thripidae): This thrips was described by I. Kudo (1995, *Appl. Entomol. Zool.* 30: 169–76) and pertains to thrips found in Hawai'i previously identified as *Neohydatothrips variabilis* and *Neohydatothrips* sp.

New Host Records:

Rhipiphorothrips pulchellus Morgan (Thysanoptera: Thripidae): Found on Java plum on 21 December 1994 by M.E. Chun.

Heteropsylla cubana (Crawford): Specimens were collected from habucha by P. Matsuda. Habucha is a legume used for making tea.

Macaria abydata Guenée (Lepidoptera: Geometridae): Specimens of this caterpillar were found on soybean leaves at a farm in Kahulu'u on 21 April 1995 by T. Culliney.

New Plant Disease Records:

Bacterial gall of oleander (*Pseudomonas syringae* pv. *savastanoi*). Diseased oleander branches from Ko 'Olina, O'ahu were collected on 13 April 1995 by R. Heu and V. Chun. This is a new state record.

Powdery mildew (*Leveilulla taurica* ana. *Oidopsis taurica*). Found on green bell peppers from Kunia, O'ahu. It was subsequently found on chili pepper at Mililani and artichoke at an HSPA planting in Kunia. Another host in Hawai'i is spider flower (*Cleome spinosa*). this disease was first reported from California. Hosts in the literature include tomato, chili pepper, artichoke, eggplant, alfalfa, and others. This is a new state record.

Banana bunchy top disease. First reported from the Kuakini Makai subdivision in Kona on Hawai'i Island in September 1995. Previously only known from O'ahu. This is a new island record.

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AWARDEES FOR 1994–1995

1994

Lifetime Excellence ..... E.C. Zimmerman
Entomologist of the Year ..... Francis G. Howarth
Student Excellence ..... Mach Fukada

1995

Lifetime Excellence ..... Jack W. Beardsley
Entomologist of the Year ..... Gordon M. Nishida
Student Excellence ..... Hector Gonzalez-Hernandez

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Funasaki,G.Y.
Gilmore, J.E.
Kohn, M.A.
McMahan, E.
Miyashita, D.H.
Nowell, W.R
Oatman, E.R.
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Shiroma, E.
Tanabe, A.
Wong, T.
Yoshimoto, C.M.
Yoshioka, E.R.

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Conant, S.
Cope, S.E.
Cornelius, M.L.
Culliney, T.W.
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Delate, K.M.
Early-Chun, M.E.
Ebesu, R.H.
Evenhuis, N.L.
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Giffin, J.
Gillespie, R.G.
Gonzalez-Hernandez, H.
Grace, J.K.
Gusukuma-Minuto, L.R.
Hanson, P.
Hapai, M.M.
Hara, A.H.
Harris, E.J.
Haverty, M.
Hayashi, S.J.
Heu, R.

† Deceased.

Higa, S.
Hinckley, A.D.
Hoch, H.
Howarth, F.G.
Hunter, W.B.
Hussain, T.
Ikeda, J.K.
Isherwood, M.O.
Iwami, I.M.
Jahn, G.C.
Jamieson, D.W.
Johnson, M.W.
Johnson, P.
Jones, V.P.
Kaichi, L.T.
Kawazoe, A.
Kaya, H.
Kido, M.
Kim, J.Y.
Kitaguchi, G.
Klungness, M.
Koga, R.E.
Kumashiro, B.R.
Kunishi, R.K.
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Lee, S.G.
Liquido, N.J.
Liu Y-B.
Luedeman, L.
Luther, G.C.
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Martono, E.
Matayoshi, S.
Mau, R.F.L.
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Miller, S.E.
Miyamoto, R.I.
Montgomery, S.L.
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Muniappan, R.
Munroe, E.G.
Myles, T.G.
Nafus, D.M.
Nagamine, W.T.
Nakahara, L.M.
Nakahara, S.
Nallur, K.K.K.
Napompeth, B.
Niedbala, W.
Nishida, G.M.
Nisson, N.J.
Nobles, A.
Oi, D.H.
Oi, F.M.
Onaga, K.
Ota, A.K.
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Pinter, L.
Purcell, M.F.
Ramadan, M.M.
Reagan, T.
Reimer, N.J.
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Rosenheim, J.
Rutschky III, C.W.
Samuelson, G.A.
Saul, S.H.
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Schaefer, P.W.
Schneider, E.L.
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Shelly, T.
Shelton, T.G.
Sher, R.B.
Shimoda, L.K.
Simon, C.M.
Smith, B.
Spadoni, R.D.
Stark, J.D.
Steck, G.J.
Strazanac, J.S.
Swift, S.F.
Takei, G.H.
Tanaka, N.
Taniguchi, G.Y.
Tanimoto, V.M.
Tenbrink, V.M.
Teramoto, K.K.
Thompson, F.C.
Toyama, G.M.
Trosper, J.H.
Tsuda, D.M.
Uchida, G.K.
Ullman, D.E.
Van Harten, A.
Vargas, R.I.
Wang, J.
Watanabe, T.M.
Willis, H.
Wirth, W.W.†
Wong, L.
Woodrow, R.
Xiao, J.
Yamamoto, R.
Yano, K.
Yates III, J.R.
Yelle, K.

† Deceased.

Proceedings of the Hawaiian Entomological Society (1998) 33: 9–12.

IN MEMORIUM

FRANKLIN CHANG
(1942-1994)

Franklin Chang, Professor of Entomology, University of Hawai'i at Mānoa, died on 28 March 1994 in Honolulu. A tennis enthusiast and member of a weekend tennis league, he had been playing tennis and suffered a stroke two days earlier.

Franklin's father, Jonathan H. H. Chang, was an exchange student from China who was attending Princeton University at the time of the outbreak of World War II. Because of the war, he and his wife, Anita, were unable to return to China. He completed his Master's degree in Economics at Princeton. Despite strong anti-Asian sentiment at that time, he was able to find professional employment and the couple started their family. They had three children, Gloria, Franklin, and Emily. Franklin was born 12 February 1942 in Princeton, New Jersey.

The family moved to Washington, D.C. where Franklin attended Patterson Elementary School. His sister, Gloria, recalls that even at an early age Frank was fascinated with insects. She remembers that as a young child he put together a beautiful butterfly collection and she thinks that he performed his first insect dissection at the age of 8! His second great interest was history, in particular World War I and World War II. As a boy, he also developed an exceedingly detailed knowledge of fighter jet aircraft and built dozens of model airplanes. In later years he would quiz his graduate students on this subject. We generally did poorly on his airplane quizzes.

The family then moved to Seat Pleasant, Maryland where Frank attended Suitland High School. His interest in history continued and was bolstered in part by the fact that his mother's older brother was the famous General Chang who among other exploits, was known for arresting Chiang Kai Shek and consequently was regarded as a popular hero in mainland China. With such illustrious relatives Frank's interest in history deepened and in high school he won a special award in history.

Frank attended the University of Maryland where he temporarily considered pursuing medicine but soon returned to his earlier interest in entomology. His career in entomology actually began in his freshman year with his first entomological employment as a biological aid for the USDA-ARS Forest Insect Research Lab in Beltsville, Maryland. It was there working for Dr. B. Maksymiuk and later with Drs. W. Robbins and W.S. Bowers in the Insect Physiology Pioneering Laboratory that he became strongly oriented toward a career in insect physiology. He completed his B.S. degree in Entomology with honors.

In 1963 he entered the graduate program with a research assistantship at Purdue University. The following year he transferred into the Ph.D. program in the Department of Entomology as a US Public Health Service trainee working under Dr. Stanley Friedman. His dissertation entitled "A Developmental Analysis of the Uptake and Release of Lipids by the Fat Body of the Tobacco Hornworm, *Manduca sexta*" was published in Volume 1 of the journal *Insect Biochemistry* in 1971.

An early achiever, at the age of only 27 he took his first academic position as an assistant professor in the Department of Biology at Alma College in Alma, Michigan. The following year he took a position as assistant professor in the Department of Entomology at the University of Hawai'i at Mānoa, where he advanced to associate professor in 1974 and professor in 1984. He served as Department Chair from 1991 until shortly before his death in 1994.

Frank's research spanned a variety of topics related to insect biochemistry, endocrinology, and physiology. His research can be divided into five main areas in approximately the following sequence: 1) lipid uptake, transport and release in hornworm larvae, 2) cuticular tanning in dipteran larvae, 3) cuticular melanization in hornworm larvae, 4) effects of precocenes on fruit flies and the diamond back moth, and 5) effects of and mode of action of benzyl-1, 3-benzodioxole derivatives (BBDs) on reproductive inhibition of fruit flies. In addition to authoring numerous papers in each of these primary areas of research, he also authored or coauthored several miscellaneous papers with various graduate students.

To Frank, insects were ideal model systems for studying basic physiological mechanisms. Perhaps his favorite "model system" was the oleander hawkmoth, *Deilephia nerii*. The moth populations would periodically break out and Frank would bring in great bunches of the poisonous oleander stalks and rear the beautiful moths from eggs, temporarily transforming the lab into a mass rearing facility. He conducted a series of elegant ligation experiments, which demonstrated the endocrine regulation of cuticular melanin formation in the last larval instar.

His later research mainly focused on the reproductive physiology of economically important fruit flies. He conducted a number of studies on the promising effects of BBDs as environmentally safe insect chemosterilants. These chemicals at first appeared to have anti-juvenile hormone effects. However, in collaboration with L. Jurd, E.B. Jang, J. Ballarino and C.-L. Hsu, he was able to demonstrate that the mode of action was on inhibition of tubulin formation rather than juvenile hormone antagonism or anti-corpora allata effects.

Frank served on numerous committees within the University, including President and Chair of the Senate Executive Committee (1993–1994) of the College of Tropical Agriculture and Human Resources. As the Entomology Department Chair and Chair of the Graduate Field in Entomology he oversaw a period of curriculum re-development and was honored with the Ka Pouhana Award in 1993 from the Office of Academic Affairs, College of Tropical Agriculture and Human Resources in recognition of his outstanding support of student learning and development through co-curriculum activities.

Frank was active in professional organizations at many levels. He was very active in the Entomological Society of America. He frequently presented papers at regional and national meetings, and he also attended many International Congresses of Entomology. He served the ESA on the Publications Council, the Youth Science Development Committee, and the Professional Training, Standards, and Status Committee. He also served on the Editorial Board of the *Annals*, becoming the Chair in 1992. He was a member of the American Registry of Professional Entomologists (ARPE) and the Council of Entomology Department Administrators (CEDA). He also served as President of the Hawaiian Entomological Society in 1978. He was also active in promoting science at the community level and had a long term involvement with the Hawaiian Science and Engineering Fair, serving from 1971 to 1992 on the Panel of Judges and at various times as Director, Associate Director, and Awards Chair.

During his youth, Frank had not grown up in a Chinese community and although he could understand Chinese he could not speak it. After his first sabbatical to Taiwan, he took up a stronger interest in the Chinese language. About 1980 he started taking university classes in Chinese and soon became fluent. He subsequently took several sabbaticals and research-related trips to Taiwan and the People's Republic of China and established ongoing cooperative research projects with Chinese colleagues.

I first met Frank in 1976 as a graduate student enroled in his insect physiology course. I liked his enthusiasm and readiness to talk about insect physiology. He enjoyed discussing hypotheses and physiological mechanisms. In those formative days of my career, I had many chalkboard discussions with Frank. He had a wonderful manner with students—he let the student talk while he would listen, muse, joke and laugh, all the while subtly instructing and guiding. I was in Frank's lab from 1976 to 1981. His graduate students during that period were Samir Araman, Marcie Horner, Chiou-Ling Hsu, Marlene Hapai and Eric Jang. I look back on those years with fond memories. I was perhaps at times a somewhat over-serious student, and I remember Frank once struggling to give me some fatherly advice. He said simply, "Tim, you need to smile more." and he smiled. It was typical of the gentleness of his character.

Frank is survived by his first wife, Cheryl and their two son's, Michael J. An-Wei and Dustin S. An-Chieh and his second wife, Chiou-Ling "Stella" and their son, Anthony B. An-Dong, parents Jonathan H.H. and Anita, and sisters Gloria Chang and Emily Mourtzanakis.

Frank had a great zest for life but his life was cut short. He had much more to contribute to insect physiology and to East-West scientific cooperation. He is missed and remembered warmly.

——Timothy G. Myles